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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,604	06/13/2001	Yoshihiro Ishizaki	U013417-6	7019

7590 11/16/2004

Ladas & Parry
26 West 61st Street
New York, NY 10023

EXAMINER	
PATEL, NIHIR B	
ART UNIT	PAPER NUMBER
3743	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/880,604	ISHIZAKI, YOSHIHIRO	
	Examiner	Art Unit	
	Nihir Patel	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *September 15th, 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *2-4,12,13 and 16-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-11,15,21,22 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on September 8th, 2004 have been fully considered but they are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The applicant argues that the case relied on for this, In re Masham applies to materials to be worked on and not conditions (temperature) thereof. The term "for" in for a fluid in a temperature range from 2K to 160K refers to intended use.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is insufficient antecedent basis for limitations "a refrigerator".

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The intended use statements are not given any patentable weight in this instance, for example "for a regenerator".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 10, 11, 21, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spokoyny et al. US Patent No. 5,323,842 in view of Sellin US Patent No. 3,431,082.

Spokoyny discloses the applicant's invention as claimed with the exception of providing numerous granules that are bonded not in contact with each other along a length and over a predetermined width of one or both surfaces of the holding device.

Sellin discloses tube furnace provided with filled bodies that does provide numerous granules that are bonded not in contact with each other along a length and over a predetermined width of one or both surfaces of the holding device. Therefore it would be obvious to modify Spokoyny's invention by providing numerous granules that are bonded not in contact with each other along a length and over a predetermined width of one or both surfaces of the holding device in make it easier to replace the granules in case it malfunctions during use.

Referring to claim 1, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from

a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

The intended use statements are not given any patentable weight in this instance for example "for a fluid in a temperature range from 2K to 160K".

Also referring to claims 1 and 22, the applicant states that the granules having a relatively uniform size of 40 to 800 micrometers. The size of the granules is simply a matter of design choice. Further, the examiner request the applicant to submit prior art that comprises regenerator comprising granules having a mean particle size ranging from 40 to 800 micrometers.

Referring to claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spokoyny et al. US Patent No. 5,323,842 in view of admitted prior art in the application (see page 2). The examiner request the applicant to submit prior art that comprises a sheet-type regenerative heat exchanger wherein the granules are made of one or more of an alloy, such as Nd, $DyNi_2$, ER_3Ni, ER_6Ni_2Sn, $ErNi_{0.9}Co_{0.1}$, Gd_5Al_2, $HOCu_2$, $GdAlO_3$, and $Nd_2Fe_{17}Al$, magnetic oxide, and a magnetic substance.

Claim 7, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spokoyny et al. US Patent No. 5,323,842 in view of Scarlata US Patent No. 4,355,627.

Referring to claim 5, Spokoyny discloses the applicant's invention as claimed with the exception of stating the type of material used to design the granules.

Referring to claims 7, 8, and 9, Spokoyny discloses the applicant's invention as claimed with the exception of stating that the holding base is designed from a fiber selected from a fiber selected from the group consisting of paraaramid fiber, high tenacity polyarylate fiber, PBO

fiber, polyethylene fiber, polytetrafluorethylene fiber, polyester fiber, polyamid fiber, natural fiber, and glass fiber, and has so small a mesh that the granules do not pass through.

Scarlata discloses thermal storage system that does state that the holding base is designed from a fiber selected from a fiber selected from the group consisting of paraaramid fiber, high tenacity polyarylate fiber, PBO fiber, polyethylene fiber, polytetrafluorethylene fiber, polyester fiber, polyamid fiber, natural fiber, and glass fiber, and has so small a mesh that the granules do not pass through (see column 8 lines 1-10). Therefore it would have been obvious to modify Spokoyny's invention by using a fiber selected from a fiber selected from the group consisting of paraaramid fiber, high tenacity polyarylate fiber, PBO fiber, polyethylene fiber, fiber, polyester fiber, polyamid fiber, natural fiber, and glass fiber, and has so small a mesh that the granules do not pass through in order to provide a strong hold on the granules.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spokoyny et al. US Patent No. 5,323,842 in view of admitted prior art in the application (see page 7). The examiner request the applicant to submit prior art that comprises a sheet-type regenerative heat exchanger wherein the granules are made of Pb-Zn alloy.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spokoyny et al. US Patent No. 5,323,842 in view of admitted prior art in the application (see page 2). The examiner request the applicant to submit prior art that comprises a sheet-type regenerative heat exchanger wherein the granules are made of one or more of an alloy, such as Nd, $DyNi_2$, ER_3Ni, ER_6Ni_2Sn, $ErNi_{0.9}Co_{0.1}$, Gd_5Al_2, $HOCu_2$, $GdAlO_3$, and $Nd_2Fe_{17}Al$, magnetic oxide, and a magnetic substance.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nihir Patel whose telephone number is (703) 306-3463. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful the examiner supervisor Henry Bennett can be reached at (703) 308-0101.

NP
November 15th, 2004

Henry Bennett
Supervisory Patent Examiner
Group 3700